

Name _____

Ch 6 Test Study Guide AE

What is a polyatomic ion?

What is a covalent bond?

For the following compounds check off if the compounds contain ionic or covalent bonds. If the bonds are covalent, check off if they are polar or nonpolar (use the electronegativity table on the back of this sheet to determine polarity). If the bond is polar, indicate the direction of the dipole.

Compound	Ionic	Covalent	Nonpolar	Polar	Direction of Dipole
Ex: H ₂ O		✓		✓	O-H
LiCl					
OF ₂					
H ₂					
CBr ₄					

What is bond length?

What is bond energy?

Complete the following table:

Element	# of Valence e ⁻	# of e ⁻ needed for an octet	# of bonds formed	# of unshared electron pairs
N				
O				
C				
F				
H				

What is an ionic bond?

How do atoms react to form positive and negative ions? Explain with the following pairs of atoms.

Li and F

Ca and I

What is the biggest difference between the strengths of covalent and ionic compounds? What physical evidence do you have to back this up?

Draw the Lewis structures for the following compounds, give their VSEPR geometry, and give their polarity.

Compound	Structure	Geometry	Polarity
NF ₃			
OI ₂			
CH ₄			
CO ₂			

What are intermolecular forces? What kind of properties do they influence? Explain how the intermolecular forces of water give it so many unique properties.